

Ever-changing Flags: Impact and Ethics of Modifying National Symbols

João M. Cunha, Pedro Martins and Penousal Machado

CISUC, Department of Informatics Engineering

University of Coimbra

{jmacunha,pjmm,machado}@dei.uc.pt

Abstract

In this paper, we propose the demonstration of a system that changes country flags based on trendy topics retrieved from news titles. We give an overview of the system and introduce the reader to several topics on which the system has impact.

Introduction

Flags are among the symbols of a nation that help the formation and maintenance of a national identity, both internally—among its citizens—and externally—keeping a coherent sense of oneness in perception of other countries and entities. This process of maintaining a collective identity is described by Geisler (2005) as an “ongoing, dynamic process in which historical symbolic meanings are constantly recycled, actualised, challenged, renegotiated, and reconfirmed”.

In fact, it is possible to analyse the evolution of a flag and its transformations, relating them to changes in the entity that the flag stands for (e.g. political changes in the country). Moreover, by looking at country flags one can easily identify similarities among them, which point to how different flags influenced each other throughout history (Healy, 1994). The exploration of this relational character is observed in imaginary scenarios, for example an alternate universe in which Nazi Germany and Imperial Japan won the World War II. This scenario is depicted in the Amazon’s mini-series “The Man In The High Castle” (Heller, 2015), resulting in the design of fictional flags for an America ruled by Nazi and Japanese forces.

Going beyond the reflection of its evolutionary path, a flag exerts its most significant role as a mean of conveying the intended image of the entity that it stands for. One example is design of a new European Union by Rem Koolhaas based on the essence of the European project as a joint effort of different nation states, each with its own identity but together contributing to a plural identity of EU¹. The redesign resulted in a barcode-style flag featuring the colors of EU countries, transmitting the idea of individual identities and simultaneous advantages of acting together.

On the other hand, the sense of identity has also fragilities. The value of one’s identity makes it so that it is of-

¹<https://oma.eu/projects/eu-barcode>

15th November 2019



Chile
“Police”



Kuwait
“Saudi”



Zimbabwe
“Drought”



Norway
“Oil”



Poland
“EU”



Philippines
“Growth”

15th July 2020



Chile
“Virus”



Kuwait
“Deaths”



Zimbabwe
“Health”



Norway
“Border”



Poland
“Election”



Philippines
“Virus”

Figure 1: Flags generated on November 15th 2019 and July 15th 2020. Below each flag, the country of the original flag and the topic used in the generation are identified.

ten prone to exploitation and manipulation, for example by the misappropriation of flags. The Double Standards project (Pater, 2012) investigated 59 seajacked ships that mask their owner’s nationality by purchasing a “cheap flag” from another country to avoid taxes and environmental regulations. Such examples highlight how volatile an identity can be, especially in a time when individual identity loses power to the growing advances of globalisation. Moreover, in addition to this dissolution of individuality, in the current society characterised by constant change, the idea of an immutable identity becomes more and more questionable.

This sense of fluid identity is explored, for example, in the

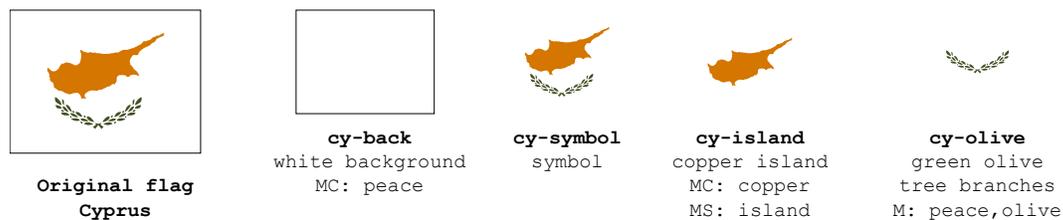


Figure 2: Data collected for the Cyprus flag: id assigned (e.g. cy-island), description (“copper island”) and meanings (M stands for general meaning, MC for meaning of colour and MS for meaning of shape).

project Net.flag (Napier, 2002), which is based on the idea of an “ever-changing flag of the Internet” that anyone can alter upon visiting its website. In our opinion, these issues are ground for an important discussion on how the identity of a nation is represented by its flag and on the impact brought by changes in this national symbol. The system that we propose to demonstrate, initially presented in (Cunha et al., 2020), aims at confronting the viewer with questions of identity, by altering country flags based on current events (see Fig. 1).

This paper has two main goals: (i) propose a system demonstration at the Eleventh International Conference on Computational Creativity (ICCC’20) and (ii) further develop on the topic of impact and ethical considerations of our system.

Mutable flags

The rate at which society changes as well as the access to global information have been increasing. One can question whether a nation only possesses an identity or, based on this constant change, if it can also be assigned what we refer to as “mood” – i.e. what is happening in the country at the moment. This concept is aligned with a flag campaign² that was made for “Grande Reportagem Magazine” in 2005, in which the meanings of seven flags were changed based on shocking facts about the country. As such, the following question is posed: Can the mood of a country be represented in its flag?

Most projects that address flag generation either consist of flag editors based on pre-defined grammars – e.g. the web app Scrontch’s Flag Designer³ by Lars Ruoff – or flag generating software such as Twitter bots – e.g. the Flags Mashup Bot⁴ produces flags that are the visual blend between two existing flags.

Three main aspects can be identified as having particular importance in an individual flag: (i) structure (i.e. how it is divided, what elements it includes, etc.); (ii) meaning associated with its elements; and (iii) what the flag symbolises (e.g. a national flag represents a nation). Nonetheless, most approaches are centred on aspects related to the structure of the flag and disregard meaning. Our system links both aspects and uses them to affect the third – what the flag represents.

²<http://creativecriminals.com/print/grande-reportagem/flags>

³<http://flag-designer.appspot.com/>

⁴<https://twitter.com/FlagsMashupBot/>

Our goal is to represent what we refer to as “mood” of the country, using the flag of a country as the starting point and applying changes according to real-time data about the country. The concept of “mood” is based on the expression *I’m in the mood for* [something], which is normally used in association with feelings that do not last long. This reactivity to external input can instil a quality of “being alive” into the flag (Martins et al., 2019), which is in full alignment with our goals.

System Overview

In this section, we provide a general overview of the system. As the system was thoroughly described in (Cunha et al., 2020), we will refrain from going into much detail.

Generating Flags The system relies on two base assumptions: (i) when generating of a flag, an existing flag would be given as input and (ii) the changes made should allow the initial flag to be recognised. The produced flag should be perceived as a transformation to the original one, thus allowing the observer to identify the country.

The first step of the flag production process consists in searching elements that match a queried word. These are then used to change the initial flag. The element search is conducted in three places:

- **Existing Flags:** we produced a flag dataset that included both visual data and semantic data (see Fig. 2). Using this dataset, a search for the input word is conducted on the meanings associated to elements of existing flags;
- **Colour Names:** we merged existing datasets to produce a list of 3,476 colours and associated names (e.g. #ef4026 has the name “Tomato”). This list is used to search for the input word;
- **Emoji:** we use the EmojiNet (Wijeratne et al., 2017) dataset to find emoji based on the input word, similar to what is done in the *Emojinating* system (Cunha et al., 2019).

The transformation made to the flag depends on the type of elements found. For example, if the input word is found on a colour name, the colour is applied to an element of the base flag. On the other hand, if the element found is an emoji, it can either be added to the flag or replace an existing symbol.

Trend-driven Flags The notion of “mutable flag” gains even more significance when combined with a sense of reactivity – something is “reactive” when it changes according



Figure 3: Flags and produced explanations, automatically generated on 15/11/2019.

to external input. Our main goal was to generate flags that changed according to current events, instilling a quality of “being alive” into them. As such, when generating a flag for a given country, the latest news titles in English that mention the name of the country are automatically retrieved by the system, which then uses them to identify the most predominant topics (nouns). To do this, we gather news titles from Google News RSS feed and conduct a Part-of-Speech tagging with the Javascript tagger jspos⁵, to extract nouns from the initial news titles and identifying the most predominant ones. Based on the most predominant ones, we then generate flags that represent the “mood” of the country.

Producing Explanations Flags have a huge layer of symbolism as most of their elements have associated meanings. When generating a flag, such layer is also of great importance. As such, in addition to producing flags, we also produce explanations that provide clues of how and why the flag was changed (see Fig. 3). This establishes a link between the visual output and the reasoning based on which the flag was produced, thus making evident the conceptual foundation of the generation process. Explanations follow a predefined structure:

[element X] *represents/stands for/symbolises* [Y]
where Y is the queried word and X depends on the change nature.

The act of providing explanations is aligned with the guidelines for explainability⁶ in AI Ethics (Jobin, Ienca, and Vayena, 2019), which has seen as having an important role in design systems – e.g. Zhu et al. (2018) focus on explainability and provide guidelines on how it can be applied in game design. Moreover, the production of explanations can be interpreted as a process of Framing as defined by Cook et al. (2019):

‘Framing’ refers to anything (co-)created by software with the purpose of altering an audience or collaborator’s perception of a creative work or its creator.

This process plays an important role in how unbiased observers perceive AI systems and their output. Furthermore, Cook et al. (2019) state that implementing methods for the systems to explain themselves can improve the relationship between user and AI agent. Framing is described as having three aspects: sources of information (e.g. where the

⁵<https://code.google.com/archive/p/jspos/>

⁶Our interpretation of the principle of explainability and transparency is based on the description from AI for People <https://www.aiforpeople.org/>

meanings of the flags are retrieved from and on what are they based), means of framing (e.g. providing descriptions in natural language for the produced flags) and purposes for framing (i.e. the intended impact on the audience). Regarding this last aspect, the main motivation behind the development of our system is to have an impact on the observer, as opposed to a generation for mere aesthetic purposes. In the following section we provide more detail on this subject.

Ethical Considerations And Potential Impact

Our goals go beyond the mere generation of flags. In fact, our main motivation was that the system and the results that it produces would have an impact on the audience.

The limits of use of a national flag have long been a topic of debate. As we have seen, flags are prone to be misappropriated – aspect highlighted in The Double Standards project (Pater, 2012). Moreover, as symbols of a nation they are often used in acts motivated by political reasons – flags being burnt in protests. For these reasons, several cases exist of controversy around what is considered legal and what is to be seen as flag desecration (Goldstein, 2019; Marinthe et al., 2019). However, the limits are often blurry and lead to strong yet opposing reactions when they are tested. One example is the installation *What is the Proper Way to Display a U.S. Flag?* by Dread Scott⁷ which showed two images featuring the American Flag, one of which displayed a flag being burnt, and encouraged the audience to write responses to the question in the installation’s title. Upon writing a response, the audience had the option of standing on the flag. The installation triggered very strong reactions – from thank you messages to death threats. But more importantly, led to a discussion on what is a misuse of the flag and the legality of such. Obviously, there is a great distance difference by purposely destroying a flag and using it to pass an idea. The latter being especially important for artistic purposes (Hartvigsen, 2018). Focusing on what we are proposing in this paper, to what extent do flags actually represent constantly evolving nations when they are subject to rules often against change and transformation? In addition, people are not always receptive to changes in the national flag as it deals with questions of their own identity (Osborne et al., 2016). This immutability reaches the point that the flag design stays the same but the meanings change – e.g. the colours of the Portuguese flag went from a political connotation (party colours) to more general ones (e.g. green being associated “hope”)

⁷<https://www.dreadscott.net/>

We intend to contribute to this discussion by questioning the unchangeable status of a flag. As such, we identify several topics that we believe our system has the potential to have impact on:

- **Own sense of identity:** the feelings towards a flag vary from person to person: some might not have a big connection to this symbol; others might proudly display it on the window to convey a sense of national support (e.g. in some countries flags are often hanged from windows in support of the national soccer team); and, possibly, there may be citizens that feel misrepresented by the flag (Wright, 2011). In any case, we believe that changing a country's flag will lead to a sense of "discomfort" by creating a gap between the original symbol and an altered version, possibly making people wonder if they still identify themselves with it;
- **Evolution of daily topics:** flags are often objects that have a very slow evolution – they stay the same for long periods. Our system brings changes in this regard by allowing flags to adapt to current events. Such approach enables the user to observe a constant change in the flag, a consequence of changes in the "mood" of the country;
- **Event Highlighting:** despite living on what can be called a "global village", there are many events that often go unnoticed, even though they deserve our utmost attention – an example is given in (Cunha et al., 2020) regarding a huge oil spill that was not widely known. Our system as the potential of being exploited as a visualisation tool with the goal of highlighting such events. Using flags to call the public attention has been explored in the past, e.g. (Pater, 2012).

Conclusion

The goal of this paper is to propose the demonstration of the system initially presented in (Cunha et al., 2020). As such, we only provided a general overview on the system and identified topics that are address by it. A video of the system being used can be seen at <https://rebrand.ly/iccc20demo>.

Acknowledgements This work is partially funded by the FCT - Foundation for Science and Technology, I.P., within the scope of the project CISUC - UID/CEC/00326/2020 and by European Social Fund, through the Regional Operational Program Centro 2020, and under the grant SFRH/BD/120905/2016.

References

- Cook, M.; Colton, S.; Pease, A.; and Llano, M. T. 2019. Framing in computational creativity-a survey and taxonomy. In *ICCC*, 156–163.
- Cunha, J. M.; Lourenço, N.; Correia, J.; Martins, P.; and Machado, P. 2019. Emojinating: Evolving emoji blends. In *Proceedings of EvoMusArt 2019*. Springer.
- Cunha, J. M.; Martins, P.; Oliveira, H. G.; and Machado, P. 2020. Ever-changing flags: Trend-driven symbols of identity. In *Proceedings of xCoAx 2020*.
- Geisler, M. E. 2005. What Are National Symbols — and What Do They Do to Us? In *National symbols, fractured identities: Contesting the national narrative*. UPNE. chapter Introducti.
- Goldstein, R. J. 2019. *Saving old glory: The history of the American flag desecration controversy*. Routledge.
- Hartvigsen, K. 2018. The flag in american art. *The American Flag: An Encyclopedia of the Stars and Stripes in US History, Culture, and Law* 45.
- Healy, D. 1994. Evolutionary Vexillography: One Flag's Influence in Modern Design. *Raven: A Journal of Vexilology* 1:41–64.
- Heller, S. 2015. American Reich. *Design Observer*.
- Jobin, A.; Ienca, M.; and Vayena, E. 2019. The global landscape of ai ethics guidelines. *Nature Machine Intelligence* 1(9):389–399.
- Marinthe, G.; Falomir-Pichastor, J. M.; Testé, B.; and Kamiejski, R. 2019. Flags on fire: Consequences of a national symbol's desecration for intergroup relations. *Group Processes & Intergroup Relations*.
- Martins, T.; Cunha, J. M.; Bicker, J.; and Machado, P. 2019. Dynamic Visual Identities: from a survey of the state-of-the-art to a model of features and mechanisms. *Visible Language* 53(2):4–35.
- Napier, M. 2002. NET.FLAG. In Stocker, G., and Schöpf, C., eds., *Ars Electronica 2002: UNPLUGGED – Art as the Scene of Global Conflicts*. Hatje Cantz Publishers.
- Osborne, D.; Lees-Marshment, J.; van der Linden, C.; and Others. 2016. National identity and the flag change referendum: Examining the latent profiles underlying New Zealanders' flag change support. *New Zealand Sociology* 31(7):19.
- Pater, R. 2012. *Double Standards*. Acter.
- Wijeratne, S.; Balasuriya, L.; Sheth, A.; and Doran, D. 2017. EmojiNet: An Open Service and API for Emoji Sense Discovery. In *Proc. of ICWSM-17*.
- Wright, G. 2011. Your flag's got my flag on it: The union jack and the australian flag. *Crux Australis* 98.
- Zhu, J.; Liapis, A.; Risi, S.; Bidarra, R.; and Youngblood, G. M. 2018. Explainable ai for designers: A human-centered perspective on mixed-initiative co-creation. In *2018 IEEE CIG*, 1–8.